# NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS (NAEP)

# DEMONSTRATION BOOKLET

# 2005 READING, MATHEMATICS, AND SCIENCE

**GRADE 8** 







2005 **Grade 8**  **SECTION** M7 M8 3 D1 MB1

**BOOK M105C** 

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# NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS 2005 DEMONSTRATION BOOKLET

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# ABOUT THIS DEMONSTRATION BOOKLET

On behalf of the National Assessment of Educational Progress (NAEP) project team, I want to thank you and other members of your school system for agreeing to participate in the NAEP assessment. Your participation is essential and highly valued. The data that NAEP provides about student achievement are widely used by policymakers, educators, and researchers throughout the nation.

Since 1969, NAEP assessments have been conducted periodically in reading, mathematics, science, writing, U.S. history, civics, geography, and the arts. In 2005, NAEP will conduct operational tests in reading, mathematics, and science at grades 4, 8, and 12.

The assessment will require about 90–100 minutes of a student's time. Each participating student will receive a reading, mathematics, or science booklet. The booklet will include two 25-minute sections of test questions and a brief background questionnaire that asks students about their experience with reading, mathematics, or science. Students' answers to all questions are confidential and student names are removed from all completed assessment materials.

This demonstration booklet describes the 2005 assessments. The first three sections explain the purposes and content of the NAEP reading, mathematics, and science assessments and provide sample test questions at each grade level. The fourth section includes the directions and the background questions that all students will be asked to answer. The final part of the booklet, located on the back cover, presents general information about the NAEP program.

The sample questions included in this booklet are intended to convey the kinds of questions and question formats that compose the 2005 assessments. All released questions from previous NAEP assessments are available to be viewed and downloaded from the NAEP web site at <a href="http://nces.ed.gov/nationsreportcard">http://nces.ed.gov/nationsreportcard</a>. The actual questions in the assessment must be safeguarded to maintain the integrity of the assessment and resulting data, but members of the public may request access to secure NAEP questions. Information on how to make such a request is included on the back page of this booklet.

If you have any questions or comments regarding the NAEP program or this booklet, please refer to the NAEP web site at *http://nces.ed.gov/nationsreportcard* or call Sherran Osborne of the National Center for Education Statistics at 202–502–7420.

Peggy G. Carr, Associate Commissioner Education Assessment National Center for Education Statistics

### THE READING ASSESSMENT

The NAEP reading assessment measures students' ability to understand, to interpret, and to think critically about different types of texts. Recognizing that readers vary their approach according to the demands of different types of text, the NAEP framework specifies the assessment of reading in three contexts: *reading for literary experience, reading to gain information*, and *reading to perform a task*. The assessment comprises reading materials selected from publications and other resources typically available to students in and out of school.

Across the three contexts for reading, students are asked to demonstrate their understanding by responding to comprehension questions that reflect four different approaches to understanding text. The NAEP framework accounts for these different approaches by specifying four aspects of reading that represent the types of comprehension questions asked of students. Forming a general understanding questions ask students to consider the text as a whole. Developing an interpretation questions ask students to discern connections and relationships within the text. Making reader/text connections questions ask students to connect information from the text with prior knowledge and experience. Examining content and structure questions ask students to critically evaluate the content, organization, and form of the text. All four aspects of reading are assessed at all three grades within the contexts for reading described above.

The NAEP reading assessment contains multiple-choice questions, as well as short and extended constructed-response questions. Students spend approximately 50 to 60 percent of their assessment time providing written answers to constructed-response questions.

#### Distribution of Percentage of Assessment Time Across Contexts for Reading in the NAEP Reading Framework

	Grade 8
Literary	40%
Informative	40%
Task	20%

### READING BOOKLET DIRECTIONS

In each of the next two sections, you will have 25 minutes to read a story, an article, or a document and answer questions about it. You should think carefully about your answers, and you should use the entire 25 minutes to complete each section.

You will be asked to respond to three different types of questions. Some of the questions will require you to choose the best answer and fill in the oval for that answer in your booklet.

For other questions, you will be asked to write short answers on the blank lines provided in your booklet. Here is an example of a question that requires you to provide a short answer.

#### Example 1

Give an example from the article that shows Mandy was not a quitter.

One example is That Mandy's mother didn't want her to umpire in public, but Mandy persuaded her mother to let her.

Also, you may be asked to answer other questions by writing longer, more detailed responses on a full page of blank lines. For example, here is a question that requires you to provide a longer answer.

#### Example 2

Explain how Mandy's mother and brother helped Mandy to become the first women umpire.

Mancle's mother helped her legangering to let her umpire at a public ball game. Mandy did so well that the team offered her a fab as umpire.

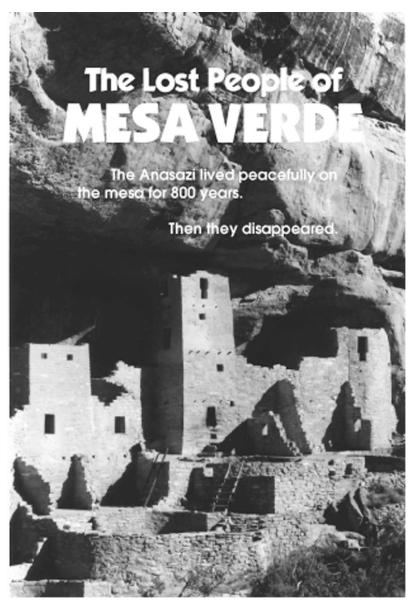
Mande's brother helped her legent her betting her play baseball with him. He also helped Mandy to persuade their mother to let her play in public.

When you are asked to write your response be sure that your handwriting is clear. Think carefully about each question and make your answers as complete as possible, using as many lines as you need.

You may go back to the story, article, or document when answering any of the questions. If you finish before time is called, be sure to read your work again and change anything that you think will make your answers better.



# SAMPLE READING QUESTIONS GRADE 8



By Elsa Marston

The Image Bank

In the dry land of southwestern Colorado a beautiful plateau rises. It has so many trees that early Spanish explorers called it Mesa Verde, which means "green table." For about eight hundred years Native Americans called the Anasazi lived on this mesa. And then they left. Ever since the cliff houses were first discovered a hundred years ago, scientists and historians have wondered why.

Anasazi is a Navajo word meaning "the ancient ones." When they first settled there, around 500A. D., the Anasazi lived in alcoves in the walls of the high canyons. Later they moved to the level land on top, where they built houses of stone and mud mortar. As time passed, they constructed more elaborate houses, like apartment buildings, with several families living close together.

The Anasazi made beautiful pottery, turquoise jewelry, fine sashes of woven hair, and baskets woven tightly enough to hold water. They lived by hunting and by growing corn and squash. Their way of life went on peacefully for several hundred years.

Then around 1200 A.D. something strange happened, for which the reasons are not quite clear. Most of the people moved from the level plateau back down into alcoves in the cliffs. The move must have made their lives

difficult because they had to climb back up to the plateau to do the farming. But it seems the Anasazi planned to stay in the canyon walls, for they soon filled the alcoves with amazing cliff dwellings. "Cliff Palace," the most famous of these, had more than two hundred rooms.

For all the hard work that went into building these new homes, the Anasazi did not live in them long. By 1300 A.D. the cliff dwellings were empty. Mesa Verde was deserted and remained a ghost country for almost six hundred years. Were the people driven out of their homes by enemies? No sign of attack or fighting, or even the presence of other tribes, has been found.

Archaeologists who have studied the place now believe there are other reasons. Mesa Verde, the beautiful green table, was no longer a good place to live. For one thing, in the second half of the thirteenth century there were long periods of cold, and very little rain fell—or else it came at the wrong time of year. Scientists know this from examining the wood used in the cliff dwellings. The growth rings in trees show good and bad growing seasons. But the people had survived drought and bad weather before, so there must have been another reason.





As the population grew, more land on the mesa top had to be farmed in order to feed the people.

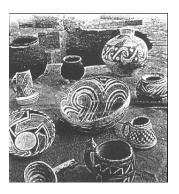
That meant that trees had to be cut to clear the land and also to use for houses and fuel. Without the forests,

How do we know about erosion problems that happened about eight hundred years ago? The Anasazi built many low dams across the smaller valleys on the mesa to slow down rain runoff. Even so, good soil washed away, and the people could no longer raise enough food. As the forests dwindled, the animals, already over-hunted, left the mesa for mountainous areas with more trees.

the rain began to wash away the

mesa top.

And as the mesa "wore out," so did the people. It appears that the Anasazi were not healthy. Scientists can learn a lot about ancient people's health by study-



The sturdy baskets, woven sandals, and beautiful pottery left behind by the Anasazi may be 1,000 years old.





Bureau of Land Management -Anasazi Heritage Center Collections

ing the bones and teeth found in burials. The mesa dwellers had arthritis, and their teeth were worn down by the grit in corn meal, a main part of their diet.

As food became scarce, people grew weaker. Not many lived beyond their twenties. Women died very young, and few babies survived. Living so close together in the cliff houses, where everyone was hungry and worried, the people must have suffered from emotional strain. They probably quarreled often.

In the end the Anasazi must have given up hope that things would get better. Families packed up and went away. Of course, the "ancient ones" did not simply disappear. They moved south-east to another area and mingled with other peoples. After a while their heritage as the people of the Mesa Verde was forgotten.

In time the trees grew back and the plateau became green once more. But, for the Anasazi it was too late. Although they respected nature and tried to farm wisely, land that was used too hard could not support them forever.

Yet in their cliff houses and crafts the "ancient ones" left us a superb monument. It is truly one of the most fascinating pictures of America's past.

WO000822

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1. After reading this article, what do you think is the most important information about the Anasazi?

WO000824

2. The three moves made by the Anasazi are listed below. Explain the possible reasons that were suggested in the article for each move.
500-1200 A.D The Anasazi moved from the alcoves to the top of Mesa Verde.
1200 A.D The Anasazi moved back down into the alcoves in the cliffs.
1300 A.D The Anasazi left Mesa Verde.
3. If you had lived with the Anasazi at Mesa Verde, would you have preferred living on the top of the mesa or in the cliff houses built into the alcoves? Explain your preference by using information from the article.

4.	you could talk to the author of this article, what is one question you could ask her bout the Anasazi that is not already answered in the article? Explain why you would rant to know this information.
5.	WOO00828 Thich idea from the text about the Anasazi do the photographs support?
	They were able to create many useful objects.
	Farming was probably their major source of food.
	Wood seems to have been their primary building material.
	Their life became much easier when they moved into the cliff dwellings.
6.	magine that you are living with the people of Mesa Verde during the 1200's when they ift the mesa. Some of your friends and neighbors do not want to leave the area. Based on information in the article, what would you tell these people to convince them to leave?

WO	$\alpha \alpha c$	100

7.	The	Anasazi's life before 1200 A.D. was portrayed by the author as being
	<b>(A)</b>	dangerous and warlike
	®	busy and exciting
	©	difficult and dreary
	Ф	productive and peacefule
8.		title and photograph on the first page of the article are probably meant to make the ppearance of the Anasazi seem to be
	$\bigcirc$	a personal tragedy
	®	a terrible mistake
	0	an unsolved mystery
	<b>(D)</b>	an important political event
9.	their	woooossa the people say that the Anasazi's success as a civilization may have actually caused or own decline. Using information in the article, explain why you agree or disagree of this statement.



### THE MATHEMATICS ASSESSMENT

The NAEP mathematics assessment measures students' ability to solve problems in five mathematics content strands: Number Properties and Operations; Measurement; Geometry; Data Analysis and Probability; and Algebra. Within each of these five content strands, students are asked questions that involve low, moderate, and high mathematical complexity.

The NAEP mathematics assessment includes multiple-choice questions, short-answer constructed-response questions, and extended constructed-response questions. The extended exercises allow students to communicate their ideas and demonstrate the reasoning they used to solve problems. The short-answer and extended-response questions make up approximately 50 percent of student assessment time. The assessment also incorporates the use of calculators (at all grades), rulers (at all grades), protractors (at grades 8 and 12), and ancillary materials such as spinners and geometric shapes in some parts of the assessment, but not all.

Calculator use is permitted on approximately one-third of the test questions (four-function calculators at Grade 4, scientific calculators at grade 8, and scientific or graphing calculators at grade 12). At grades 4 and 8, NAEP provides calculators for all students. At grade 12, students may use their own scientific or graphing calculators.

#### Distribution of Percentage of Assessment Questions Across Content Strands in the NAEP Mathematics Framework

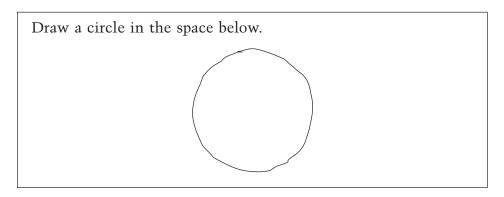
	Grade 8
Number Properties and Operations	20%
Measurement	15%
Geometry	20%
Data Analysis and Probability	15%
Algebra	30%

### MATHEMATICS BOOKLET DIRECTIONS

This assessment uses many different booklets. Each booklet has different questions. Do not worry if the person next to you is working on questions that do not look like those you are working on.

Read each question carefully and answer it as well as you can. Do not spend too much time on any one question.

For some of the questions you may need to write or draw the answer. You can see how this is done in the example below.



You may be given a calculator to use for at least one part of your booklet. If you are given a calculator, you will have to decide when to use it in each section where its use is permitted. For some questions using the calculator is helpful, but for other questions the calculator may not be helpful. After each question you will be asked to indicate whether you used the calculator.

When you receive the calculator, make sure you know how to use it. There are instructions on the back cover of this booklet to help you. If the calculator does not work or if you do not know how to use it, raise your hand and ask for help.

#### **REMEMBER:**

Read each question CAREFULLY.

Fill in only ONE OVAL for each question or write your answer in the space provided.

If you change your answer, ERASE your first answer COMPLETELY.

CHECK OVER your work if you finish a section early.



Do not go past the STOP sign at the end of each section until you are told to do so.



# SAMPLE MATHEMATICS QUESTIONS GRADE 8

1.		the following, which is the best unit to use when measuring the growth of a nt every other day during a 2-week period?
	lack	Centimeter
	$^{lacktriangle}$	Meter
	©	Kilometer
	<b>(</b>	Foot
	(E)	Yard

- **2.** Jaime knows the following facts about points A, B, and C.
  - Points *A*, *B*, and *C* are on the same line, but might not be in that order.
  - Point *C* is twice as far from point *A* as it is from point *B*.

Jaime concluded that point C is always between points A and B.

Is Jaime's conclusion correct?

Yes 
 No

In the space provided, use a diagram to explain your answer.



- 3. In the figure above, what fraction of rectangle ABCD is shaded?
  - $\bigcirc$   $\frac{1}{6}$
  - $\oplus \frac{1}{5}$
  - $\bigcirc \frac{1}{4}$
  - $\bigcirc$   $\frac{1}{3}$
  - $\odot \frac{1}{2}$

### THE SCIENCE ASSESSMENT

The NAEP science assessment is organized according to a content-by-process matrix. The content area consists of three fields of science: earth science, life science, and physical science. The three process categories (knowing and doing) are conceptual understanding, scientific investigation, and practical reasoning. In addition, there are two overarching domains that describe science, nature of science, and themes.

The 2005 NAEP assessment in science contains multiple-choice questions, as well as short and extended constructed-response exercises. At least 50% of the assessment time is devoted to constructed-response exercises. These questions measure students' knowledge of facts, ability to integrate this knowledge into larger constructs, and the capacity to use the tools, procedures, and reasoning processes of science to develop an increased understanding of the natural world.

# Distribution of Percentage of Assessment Time Across Fields of Science in the NAEP Science Framework

	Earth Science includes solid Earth, water, air, and Earth in space	Physical Science includes matter, energy, and motion	Life Science includes change and evolution, cells, organisms, and ecology
Grade 8	30%	30%	40%

### SCIENCE BOOKLET DIRECTIONS

In each of sections 1 and 2, you will have 25 minutes to answer a series of questions about science.

You will be asked to respond to several different types of questions. Some of the questions will require you to choose the best answer and fill in the oval for that answer in your booklet. On questions like this, be sure to mark your answers clearly and darken the oval completely. If you make a mistake or want to change your answer, be sure to erase any unwanted marks. Here is an example of a question that requires you to fill in an oval.

#### Example 1

How hot is it on the surface of the Sun?

- Not quite as hot as boiling water
- About as hot as fire
- © About 100°F
- Much hotter than almost anything on Earth

For some questions, you will be asked to write short answers on the blank lines provided in your booklet. Here is an example of a question that requires you to provide a short answer.

#### Example 2

Describe one important difference between plants and animals.

Most plants make their own food, while animals eat plants and other animals for food.

SCIENCE-GRADE 8 — 20

Also, you will be asked to answer some questions by writing longer, more detailed responses. For example, here is a question that requires you to provide a longer answer.

#### Example 3

Describe three things that animals do to survive in areas that have cold winters.

Some animals store a lot of fat so that they can go into a deep sleep all winter. Some animals grow a thick coat of fur to keep them warm. Some birds and butterflies fly away from a cold area and spend the winter in a place that is warm and has a lot of food.

When you are asked to write your response be sure that your handwriting is clear. Think carefully about each question and make your answers as complete as possible, using as many lines as you need. If you finish a section before time is called, you may go back and check your work on that section only.

Finally, in some questions you may be asked to draw a diagram or fill in a table.



# SAMPLE SCIENCE QUESTIONS GRADE 8

п.00108

	nings?
A	The Earth's oceans are salty.
®	The Earth has magnetic poles.
©	The Earth's atmosphere contains a lot of oxygen.
0	The Earth's crust contains a lot of volcanic rock.
Cá	aul's little sister, Sarah, wants to know why she can see herself <u>in</u> a mirror, but she an see <u>through</u> a window. What should Raul tell his sister to explain the differences etween mirrors and windows?

3.		ertain organism has many cells, each containing a nucleus. If the organism kes its own food, it would be classified as
	<b>(A)</b>	a bacterium
	$^{ ext{ B}}$	a fungus
	0	a plant
	<b>(</b>	an animal
4.	aud san The ech	ile practicing for a play, a student standing on the stage of a large, empty itorium shouts loudly and hears her voice echo throughout the room. Later, the student is on the stage of the same auditorium which is now full of quiet people. Estudent shouts again, just as loudly. This time however, she does not hear an o. Explain why she hears an echo the first time and why she does not hear an echo second time.



### STUDENT BACKGROUND QUESTIONNAIRE

#### **GENERAL DIRECTIONS FOR GRADE 8**

In the next two sections, you will be asked questions about yourself and your education. The choices for some questions will be written across the page as shown. Fill in the oval for the best answer.

#### Example 1

	Never or hardly ever	Once or twice a month	Once or twice a week	Almost every day
1. How often do you watch movies on TV?	<b>(A)</b>	B	©	•

You should have filled in the oval below the answer that best tells how often you watch movies on TV.

The choices for some questions will be written down the page as shown. Now read Example 2 and indicate your answer.

#### Example 2

Which event would you prefer to attend?
A basketball game
B car show
C concert
D play

Make your answer mark clear and dark in the oval. If you make a mistake or want to change your answer, be sure to completely erase any unwanted marks.

Do not go past the STOP sign at the end of each section until you are told to do so.

If you finish before time is called, go back and check your work on that section only. Use your time carefully. Do as much as you can in each section.

# STUDENT BACKGROUND QUESTIONNAIRE

In this section, please tell us about yourself and your family. The section has 13 questions. Mark your answers in your booklet.

VB331330

- 1. Are you Hispanic or Latino? Fill in **one or more ovals.** 
  - No, I am not Hispanic or Latino.
  - (B) Yes, I am Mexican, Mexican American, or Chicano.
  - © Yes, I am Puerto Rican or Puerto Rican American.
  - Yes, I am Cuban or Cuban American.
  - © Yes, I am from some other Hispanic or Latino background.

VB331331

- 2. Which of the following best describes you? Fill in **one or more ovals.** 
  - White
  - ® Black or African American
  - © Asian
  - American Indian or Alaska Native
  - © Native Hawaiian or other Pacific Islander

No

For the rest of the questions in this section, fill in only **one** oval for each question.

1	,, <sub>1</sub>
3. Does your family get a newspaper at least four times a week?  A Yes  No  I don't know.	7. Is there an encyclopedia in your home? It could be a set of books, or it could be on the computer.  A Yes  No  C I don't know.
4. Does your family get any magazines regularly?  A Yes  No  I don't know.	8. About how many pages a day do you have to read in school and for homework?
5. About how many books are there in your home?	① 16–20 ① More than 20
<ul> <li>Few (0–10)</li> <li>Enough to fill one shelf (11–25)</li> <li>Enough to fill one bookcase (26–10)</li> <li>Enough to fill several bookcases (more than 100)</li> </ul>	9. How often do you talk about things you have studied in school with someone in your family?  (a) Never or hardly ever  (b) Once every few weeks
6. Is there a computer at home that you use?  A Yes	<ul> <li>About once a week</li> <li>Two or three times a week</li> <li>Every day</li> </ul>

- 10. How many days were you absent from school in the last month?
  - A None
  - ® 1 or 2 days
  - © 3 or 4 days
  - ① 5 to 10 days
  - More than 10 days

VB330870

- 11. How far in school did your mother go?
  - She did not finish high school.
  - ® She graduated from high school.
  - © She had some education after high school.
  - She graduated from college.
  - © I don't know.

VB330871

- 12. How far in school did your father go?
  - A He did not finish high school.
  - B He graduated from high school.
  - The had some education after high school.
  - He graduated from college.
  - © I don't know.

VR331451

- 13. How often do people in your home talk to each other in a language other than English?
  - Never
  - Once in a while
  - About half of the time
  - All or most of the time

# STUDENT BACKGROUND QUESTIONNAIRE

#### **READING-GRADE 8**

This section has 13 question	s. Mark you	r answers in	n your	booklet.	Fill in	only <b>one</b>	oval for
each question.	•		•			•	

1. Please indicate how much you DISAGREE or AGREE with the following statements about reading and writing. Fill in **one** oval on each line.

	Strongly disagree	Disagree	Agree	Strongly agree	
a. When I read books, I learn a lot.	<b>(A)</b>	$^{ ext{ B}}$	©	0	VB345623
b. Reading is one of my favorite activities.	(A)	®	©	0	VB3456224

VB379288

2. How often do you do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	Almost every day	
a. Read for fun on your own time	<b>(A)</b>	₿	©	<b>(</b>	VB379289
b. Talk with your friends or family about something you have read	<b>(A)</b>	®	©	<b>(</b>	VB379290

3. NOT including reading that you do for school, how often do you spend time reading each of the following types of **fiction**? Fill in **one** oval on each line.

	Never or hardly ever	A few times a year	Once or twice a month	At least once a week	
a. Comic books or joke books	<b>(A)</b>	$^{\odot}$	©	•	VB345629
b. Fiction books or stories (books or stories about imagined events)	<b>(A)</b>	₿	©	0	VB345630
c. Plays	A	$^{ ext{ B}}$	©	•	VB345631
d. Poems	<b>(A)</b>	B	©	<b>(D)</b>	VB345632

VB345657

4. NOT including reading that you do for school, how often do you spend time reading each of the following types of **non-fiction**? Fill in **one** oval on each line.

	Never or hardly ever	A few times a year	Once or twice a month	At least once a week	
a. Biographies or autobiographies	A	<b>®</b>	0	<b>(D)</b>	VB345658
b. Books about science (for example, nature, animals, astronomy)	<b>(A)</b>	₿	0	0	VB345659
c. Books about technology (for example, machines, computers)	A	®	0	•	VB345660
d. Books about other countries	lack	₿	©	0	VB345661
e. Books about history	A	$^{ ext{ B}}$	0	0	VB345662
f. Other non-fiction books	A	®	©	<b>(</b>	VB345664

5. NOT including reading that you do for school, how often do you spend time reading each of the following types of **articles or stories**? Fill in **one** oval on each line.

	Never or hardly ever	A few times a year	Once or twice a month	At least once a week	
a. Articles or stories in a newspaper	<b>(A)</b>	B	0	•	VB345641
b. Articles or stories in a magazine	(A)	$^{ ext{ B}}$	©	•	VB345642
c. Articles or stories on the Internet	<b>(A)</b>	®	©	<b>(D)</b>	VB345643

VB345644

6. Now think about reading and writing you do for school. For your **English** class this year, how often do you do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	A few times a year	Once or twice a month	At least once a week	
a. Have a class discussion about something that the whole class has read	<b>(A)</b>	₿	©	•	VB345645
b. Work in pairs or small groups to talk about something that you have read	<b>(A)</b>	₿	©	•	VB345646
c. Write in a journal about something that you have read for English class	<b>(A)</b>	₿	©	0	VB345647

7. For your **English** class so far this year, how many times have you done each of the following? Fill in **one** oval on each line.

1	Never	Once	_ 01 0	4 or 5 times	6 or more times	
a. Written a report or paper about something that you have read (for example, a book report)	<b>(A)</b>	B	©	<b>(D)</b>	(E)	VB345649
b. Made a presentation to the class about something that you have read	A	B	©	•	(E)	VB345650
c. Done a project about something that you have read (for example, written a play, created a web site)	A	B	©	•	<b>(E)</b>	VB345651

VB345652

8. Think about the classes that you are taking this year. How often do you read something that is **NOT** a textbook for each of the following classes? Fill in **one** oval on each line.

		Never or hardly ever	A few times a year	Once or twice a month	At least once a week	I don' take th class	-
a.	English class (for example, plays, fiction books)	<b>(A)</b>	®	0	0	(Ē)	VB345653
b.	Science class (for example, science magazines, biographies of scientists)	A	₿	©	•	Ē	VB345654
c.	Social studies or history class (for example, books about peopl who lived a long time ago, real letters written a long time ago)	e e	(3)	©	0	Ē	VB345655
d.	Math class (for example, math word-games)	A	₿	©	0	Œ	VB345656

					VB345715
9. For school this year, how often hat tests or assignments that involve		d to write l	ong answer	s to questi	
Never					
® Once or twice this year					
Once or twice a month					
① At least once a week					
10. When you have reading assignme following? Fill in <b>one</b> oval on each		v often doe	s your teacl	ner do each	vB429520 n of the
	Never or hardly ever	Once or twice a month	Once or twice a week	Almost every day	
<ul> <li>Ask you to explain or support your understanding of what you have read</li> </ul>	<b>(A)</b>	B	0	0	VB429521
b. Ask you to discuss different interpretations of what you have read	<b>(A)</b>	B	©	0	VB429582
11. How hard was this test compared	d to most other te	sts vou hav	e taken this	s vear in so	VB595182
⚠ Easier than other tests		,		,	
About as hard as other tests	}				
© Harder than other tests					
Much harder than other tes	ts				

- 12. How hard did you try on this test compared to how hard you tried on most other tests you have taken this year in school?
  - Not as hard as on other tests
  - About as hard as other tests
  - Harder than other tests
  - Much harder than other tests

VB595184

- 13. How important was it to you to do well on this test?
  - A Not very important
  - Somewhat important
  - Important
  - O Very important



# STUDENT BACKGROUND QUESTIONNAIRE

#### MATHEMATICS—GRADE 8

This section has 16 questions. Mark your answers in your booklet. Fill in only **one** oval for each question.

1. What math class are you taking this 2. What math class do you expect to take year? next year? Geometry Geometry Algebra II Algebra II Algebra I (one-year course) Algebra I (one-year course) Tirst year of a two-year Algebra I First year of a two-year Algebra I course course © Second year of a two-year © Second year of a two-year Algebra I Algebra I course course Introduction to algebra or pre-Introduction to algebra or prealgebra algebra © Basic or general eighth-grade math © Basic or general math Integrated or sequential math Integrated or sequential math Other math class Business or consumer math

O Other math class

□ I don't know

- 3. How often do you use a computer for math at school?
  - Never or hardly ever
  - Once every few weeks
  - About once a week
  - Two or three times a week
  - © Every day or almost every day

VB543148

- 4. On a typical day, how much time do you spend doing work for math class on a computer? Include work you do in class and for homework.
  - A None
  - Half an hour or less
  - About 1 hour
  - About 2 hours
  - More than 2 hours

VR543155

5. When you are doing math for school or homework, how often do you use these **different types of computer programs**? Fill in one oval on each line.

	Never or hardly ever	Once every few weeks	About once a week	Two or three times a week	Every d or almo every day	st
a. A spreadsheet program for math class assignments	A	®	0	•	Ē	VB543157
b. A program to practice or drill on math facts (addition, subtraction, multiplication, division)	A	B	©	•	©	VB543158
c. A program that presents new math lessons with problems to solve	A	®	0	0	Œ	VB543160
d. The Internet to learn things for math class	<b>(A)</b>	B	0	0	Œ	VB543159
e. A calculator program on the computer to solve or check problems for math class	<b>(A)</b>	B	0	0	Œ	VB543161
f. A graphing program on the computer to make charts or graphs for math class	<b>(A)</b>	B	©	•	Œ)	VB543262
g. A statistical program to calculate patterns such as correlations or cross tabulation	(A)	®	0	0	Œ	VB517157
h. A word processing program to write papers for math class	<b>(A)</b>	®	©	0	Ē	VB543156
i. A drawing program to work with geometric shapes for math class	<b>(A)</b>	B	0	•	Œ	VB543263

6. When you are **doing math for school or homework**, how often do you **use a computer** for the following? Fill in one oval on each line.

	Never or hardly ever	Once every few weeks	About once a week	Two or three times a week	or almos every day	,
a. Chat online with friends about math class work or homework (for example, e-mail, chat rooms, or instant messaging)	<b>(A)</b>	₿	©	•	Œ	VB543152
b. Find out about math class work or homework from your teacher using e-mail, instant messaging, web, etc.	A	B	©	<b>©</b>	Ē	VB543153
c. Use a computer to get help with math from an outside source (for example, online tutoring)	<b>(A)</b>	₿	0	•	Ē	VB543154

VB543265 VB543264

- 7. How often do you use a computer to play math games in your math class?
  - Never or hardly ever
  - Once every few weeks
  - About once a week
  - Two or three times a week
  - © Every day or almost every day

- 8. How often do you use a computer to play math games that are **not for a math class**?
  - Never or hardly ever
  - ® Once every few weeks
  - About once a week
  - Two or three times a week
  - © Every day or almost every day

9. How often do you use these different types of calculators in your math class?

	Never use	Sometimes but not often	Usually use	
a. Basic four-function (addition, subtraction, multiplication, division)	A	B	0	VB517160
b. Scientific (not graphing)	<b>(A)</b>	₿	©	VB517162
c. Graphing	A	®	©	VB517282

VB543267

- 10. What kind of calculator do you usually use when you are not in math class?
  - None
  - ® Basic four-function (addition, subtraction, multiplication, division)
  - © Scientific (not graphing)
  - Graphing

/B543269

11. For each of the following activities, how often do you use a **calculator**? Fill in **one** oval on each line.

	Never or hardly ever	Once every few weeks	About once a week	Two or three times a week	every da or almo every day	,
a. To check your work on ma homework assignments	ith 🖎	®	©	•	Œ	VB543270
b. To calculate the answers t math homework problems	_	B	©	•	(E)	VB543271
c. To work in class on math lessons led by your teache	A r	B	©	•	(Ē)	VB543272

- 12. When you take a math test or quiz, how often do you use a calculator?
  - A Never
  - Sometimes
  - Always

VB543276

- 13. This year, have you used **computers** to help you learn math in an after-school or tutoring program?
  - A Yes
  - No

VB595182

- 14. How hard was this test compared to most other tests you have taken this year in school?
  - Easier than other tests
  - About as hard as other tests
  - Harder than other tests
  - Much harder than other tests

VC034559

- 15. How hard did you try on this test, compared to how hard you tried on most other tests you have taken this year in school?
  - Not as hard as on other tests
  - About as hard as on other tests
  - Harder than on other tests
  - Much harder than on other tests

VB595184

- 16. How important was it to you to do well on this test?
  - Not very important
  - Somewhat important
  - Important
  - O Very important



# STUDENT BACKGROUND QUESTIONNAIRE

#### **SCIENCE—GRADE 8**

This section has 10 questions. Mark your answers in your booklet. Fill in only **one** oval for each question.

1. How much do you agree with the following statements? Fill in **one** oval on each line.

	Disagree	Not sure	Agree	
a. I like science.	A	$^{ ext{ B}}$	©	HE002997
b. I am good at science.	<b>(A)</b>	₿	©	HE002998
c. Science is useful for solving everyday problems.	A	₿	©	HE003000
d. Science is boring.	A	B	©	HE003003

LC000166

- 2. Which best describes the science course you are taking?
  - I am not taking a science course this year.
  - Life science (for example, biology)
  - Physical science (for example, physics or chemistry)
  - Earth science (for example, geology or astronomy)
  - © General science (several content areas of science taught separately)
  - Integrated science (several content areas of science combined and taught together throughout the year)

3. When you study science in school, how often do you do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	Almost every day	
a. Read a science textbook	<b>(A)</b>	<b>®</b>	0	<b>(D)</b>	HE003015
b. Read a book or a magazine about science	<b>(A)</b>	®	0	•	HE003016
c. Discuss science in the news	A	®	0	<b>(</b>	HE003017
d. Work with other students on a science activity or project	<b>(A)</b>	®	©	•	WO001033
e. Give an oral science report	<b>(A)</b>	®	0	0	WO001034
f. Prepare a written science report	<b>(A)</b>	®	©	0	WO001035
g. Do hands-on activities or investigations in science	<b>(A)</b>	<b>B</b>	0	•	LD001451
h. Talk about the measurements and results from your hands-on activities or investigations	<b>(A)</b>	®	©	0	LD001477
i. Use a computer for science	<b>(A)</b>	$^{ ext{ B}}$	©	<b>(D)</b>	WO001038
j. Take a science test or quiz	<b>(A)</b>	$^{ ext{ B}}$	©	0	WO001039
k. Use library resources for science	A	®	©	<b>(</b>	WO001040

WO001042

4. When you study science in school, how often does your teacher do each of the following? Fill in **one** oval on each line.

	Never or hardly ever	Once or twice a month	Once or twice a week	Almost every day	
a. Do a science demonstration	<b>(A)</b>	®	0	<b>(D)</b>	WO001044
b. Use computers for science (e.g., science software, telecommunications)	(A)	₿	©	0	WO001046

5.	Have you ever	done hands-o	on activities	or projects i	n school	with an	y of the	following?	Fill
	in all ovals tha	it apply.		- /			•	C	

a.	Living things (for example, plants, animals, bacteria)	A	HE003006
b.	Electricity (for example, batteries and flash bulbs)	A	HE003007
c.	Chemicals (for example, mixing or dissolving sugar or salt in water	<b>(A)</b>	HE003008
d.	Rocks or minerals (for example, identifying types)	<b>(A)</b>	HE003009
e.	Magnifying glass or microscope (for looking at small things)	<b>(A)</b>	HE003010
f.	Thermometer or barometer (for making measurements)	<b>(A)</b>	HE003011
g.	Simple machines (for example, pulleys and levers)	<b>(A)</b>	HE003012
h.	None of the above	A	HE003013

QK070712

LC000147

6. Do you ever do science projects in school that take a week or more?

- A Yes
- ® No

- 7. This year in school, how often have you been asked to write long answers to questions on tests or assignments for science?
  - A Never
  - ® Once or twice this year
  - Once or twice a month
  - At least once a week

- 8. How hard was this test compared to most other tests you have taken this year in school?
  - Easier than other tests
  - About as hard as other tests
  - Harder than other tests
  - Much harder than other tests

VC034559

- 9. How hard did you try on this test compared to how hard you tried on most other tests you have taken this year in school?
  - Not as hard as on other tests
  - About as hard as on other tests
  - Harder than on other tests
  - Much harder than on other tests

VB595184

- 10. How important was it to you to do well on this test?
  - A Not very important
  - Somewhat important
  - Important
  - O Very important



# NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS 2005 READING, MATHEMATICS, AND SCIENCE

#### INFORMATION ABOUT NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

**PROJECT MISSION.** NAEP is administered by the U.S. Department of Education to report on the achievement of American students in key academic subjects. For more information about the NAEP program, visit the NAEP web site at <a href="http://nces.ed.gov/nationsreportcard">http://nces.ed.gov/nationsreportcard</a> or call 202–502–7420.

**PARTICIPATION.** States and districts that receive Title I funds are required to participate in biennial NAEP reading and mathematics assessments at grades 4 and 8. Teacher and student participation is always voluntary. Contact your school's NAEP coordinator for more information.

**NAEP CONTENT.** The National Assessment Governing Board (NAGB) develops frameworks detailing what students reasonably might be expected to know and do for each subject assessed by NAEP. For additional information on framework development, see the NAGB web site at <a href="http://nagb.org">http://nagb.org</a>.

**SAMPLE NAEP QUESTIONS.** For each assessment, some of the test questions, along with performance data, are made available to the public to provide concrete samples of NAEP contents and results. For every assessment, NAEP distributes to participating schools demonstration booklets that provide more detailed information about the assessment design and questions. Released questions and student performance data may be viewed on and downloaded from the NCES web site at <a href="http://nces.ed.gov/nationsreportcard/itmrls">http://nces.ed.gov/nationsreportcard/itmrls</a>.

**SECURE NAEP QUESTIONS.** On written request, adults may review NAEP questions and instruments still in use. These arrangements must be made in advance, and persons reviewing the assessment may not remove the booklets from the room, copy them, or take notes. Contact your school's NAEP coordinator for more information.

**NAEP REPORTS.** NAEP publications can be searched and downloaded from the NAEP web site at *http://nces.ed.gov/nationsreportcard*.

**FOR FURTHER INFORMATION.** For prompt field staff support on these or other matters, call the NAEP Help Desk at 800–283–6237.

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